

Appl. No. 10/765,707
Amdt. dated February 27, 2006

PATENT

REMARKS/ARGUMENTS

In this Amendment, independent claims 1 and 10 are amended, non-elected claims 16-25 are canceled, and claims 27-35 are added so that claims 1-15 and 26-35 are pending and subject to examination on the merits. A Declaration Pursuant to 35 C.F.R. § 1.132 is attached.

On January 12, 2006, an interview between the Examiner and the undersigned occurred. The Examiner is thanked for his careful consideration of the issues presented by the undersigned during the interview.

At page 2 of the Office Action, the claims are restricted into three groups. Applicants acknowledge the restriction requirement and have canceled the non-elected claims. Applicants reserve the right to pursue the canceled subject matter in one or more divisional patent applications.

Claims 1-3, 5, 8-15, and 26 are rejected as anticipated by Williams et al. (U.S. Patent No. 5,961,154). According to the Examiner, Williams et al. teaches a slip collar including a tubular outer wall portion (reference number 20), a tubular inner wall portion (reference number 60), and an intermediate portion (reference number 62, Figure 2). The anticipation rejection is traversed.

Williams et al. does not teach or suggest a slip collar comprising, *inter alia*, a tubular outer wall portion, a tubular wall inner portion, and an intermediate portion all comprising a fiber reinforced plastic material, wherein these portions form an integral, one-piece structure as recited in independent claims 1 and 10. Williams et al. discloses a fume duct joint. As clearly shown in FIG. 2 of Williams et al., reference numbers 20 and 60 are separable pieces that are joined together using a number of bolts 50 (see FIG. 1) and adhesives. The fume duct joint shown in Williams et al. is *not* an "integral, one piece structure" as recited in independent claims 1 and 10. Accordingly, it is clear that Williams et al. does not anticipate the claims.

Applicants also submit that the claims are not obvious in view of Williams et al. Because Williams et al. uses multiple separate parts to form a duct joint, there is no suggestion or motivation to modify Williams et al.'s joint to include an integral, one-piece slip collar with slot regions as recited in the claims.

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In addition, embodiments of the invention provide for a number of non-obvious advantages over the duct joint described in Williams et al. In support, Applicants are submitting herewith the Declaration of Joseph Plecnik Pursuant to 37 C.F.R. § 1.132 ("the Plecnik Declaration"). At paragraphs 5-8, Dr. Plecnik states the following:

5. I believe that the slip collar that is described in the present application has a number of advantages. Some advantages are provided at paragraph [0027] of the present application. Paragraph [0027] states:

The slip collars according to embodiments of the invention are especially useful for joining ducts. As explained below, in preferred embodiments of the invention, an adhesive composition can be deposited in the first and second slot regions, and two sections of duct can be joined quickly and accurately, without the need for extensive aligning of the duct sections. Thus, slip collars according to embodiments of the invention can be used to "self-align" two adjacent duct sections. In addition, the joint that is formed between connected duct sections is strong and can have fire resistance and chemical resistance. The slip collars include both inner and outer wall portions. They provide [for better] joint strength and for a better barrier for fumes than slip collars that are made from only a single layer of material. For example, in order for a gas inside of a duct assembly to leak from the interior to the exterior, a gas would have to traverse through the two wall portions of the slip collar and the walls of the duct sections that are being joined. Also, by using the slip collars according to embodiments of the invention, ductwork can be installed quickly and accurately. A duct network that is formed using the slip collars according to embodiments of the invention will be strong and reliable. Although slip collars for ducts are described in detail, embodiments of the invention may be used to join other types of tubular articles such as two sections of pipe.

I believe that these advantages make the slip collar described in the present application better than the duct joint described in Williams et al. Further advantages of the slip collar described in the present application over the duct joint described in Williams et al. are provided below.

6. I believe that it takes less time to assemble ducts using the slip collar described in the present application, than the duct joint described in Williams et al. To join two duct sections together in Williams et al., slip collar 60, as shown

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in FIG. 4 of the Williams et al. patent, is coated with an adhesive. As shown in FIG. 5 of the Williams et al. patent, the duct sections are then joined to the adhesively coated slip collar 60. A sealant 84 is then coated on the joined duct sections. Once joined, outer clamp portions 22, 24 are assembled around the slip collar 60 using bolts 50 (see FIG. 5). It is apparent that the process described in Williams et al. uses at least six separate process steps. Compared to the Williams et al. process which uses at least six process steps to form a duct joint, the slip collar that is described in the present application can use three or four process steps to form a duct joint. The slip collar that is described in the present patent application is a one-piece structure. The one-piece structure has slot regions and these regions can be coated with an adhesive. Once surfaces of the slip collar defining the slot region are coated, the two duct sections are inserted into the slot regions. Optional set screws may be used to secure the slip collar to the joined duct sections. Thus, the slip collar that is described in the present application can be used to form a joint more quickly than the components described in Williams et al. Consequently, significant amounts of time, labor, and money can be saved using the slip collar that is described in the present application, as compared to the duct joint that is described in Williams et al.

7. The resulting duct joint that is formed when using the slip collar described in the present application is stronger than the duct joint that is formed in Williams et al. Duct joints are often the weakest points of any duct system, and it is desirable to make sure that these weak points are as strong as possible. The duct joint described in Williams et al. has multiple parts including an inner slip collar 60 and outer clamp portions which are joined by bolts 50 and adhesive layers. The regions where these multiple parts are joined can potentially fail. In comparison, the slip collar that is described in the present application is a one-piece structure and does not have joining regions like those described in Williams et al. I believe that the slip collar that is described in the present application is stronger and is less prone to failure than the duct joint described in Williams et al.

8. In summary, I believe that the slip collar that is described in the present application is not shown or suggested by Williams et al., and that the slip collar that is described in the present application has a number of advantages over the duct joint that is described in Williams et al.

As evidenced by the Plecnik Declaration, embodiments of the invention provide for a number of non-obvious advantages over the closest prior art cited by the Examiner, Williams et al. These advantages include more efficient and less costly duct assembly procedures, as well as stronger joints. Accordingly, in view of Applicants' amendments and the Plecnik Declaration, Applicants believe that the present claims are patentable over Williams et al.

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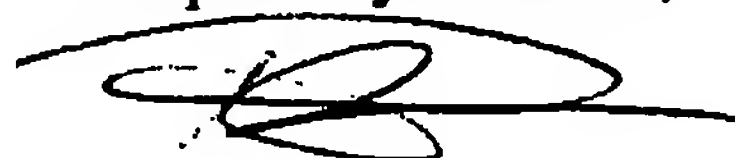
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At pages 8-12 of the Office Action, the following rejections are made: claim 4 is rejected as obvious over Williams et al. in view of Shea et al. (U.S. Patent No. 5,505,497); claim 6 is rejected as obvious over Williams et al. and Nishio (U.S. Patent No. 6,045,164); and claim 7 is rejected as obvious over Williams et al. and Shea (U.S. Patent No. 5,383,994). The secondary references are cited to address limitations in the various dependent claims. Applicants submit that the secondary references fail to remedy the deficiencies of the primary reference, Williams et al. As explained above, one would not have been motivated to modify Williams et al. to arrive at the inventions of the present claims and embodiments of the invention have a number of non-obvious advantages over the duct joint that is described in Williams et al. Accordingly, the rejected dependent claims are allowable as they depend from novel and unobvious independent claims, and because they recite additional, non-obvious features.

CONCLUSION

In view of the foregoing, Applicants request a favorable Action on the merits. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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